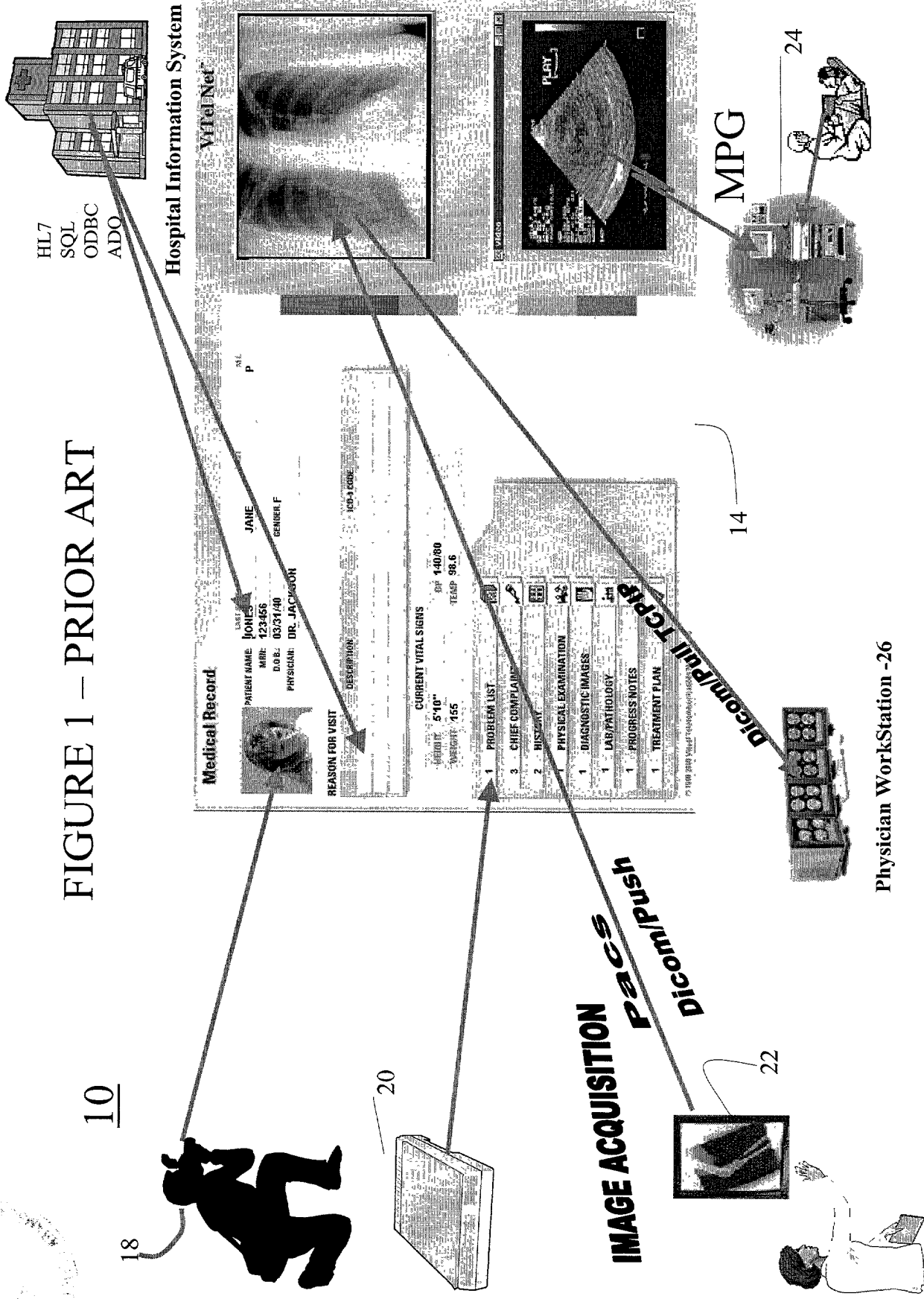
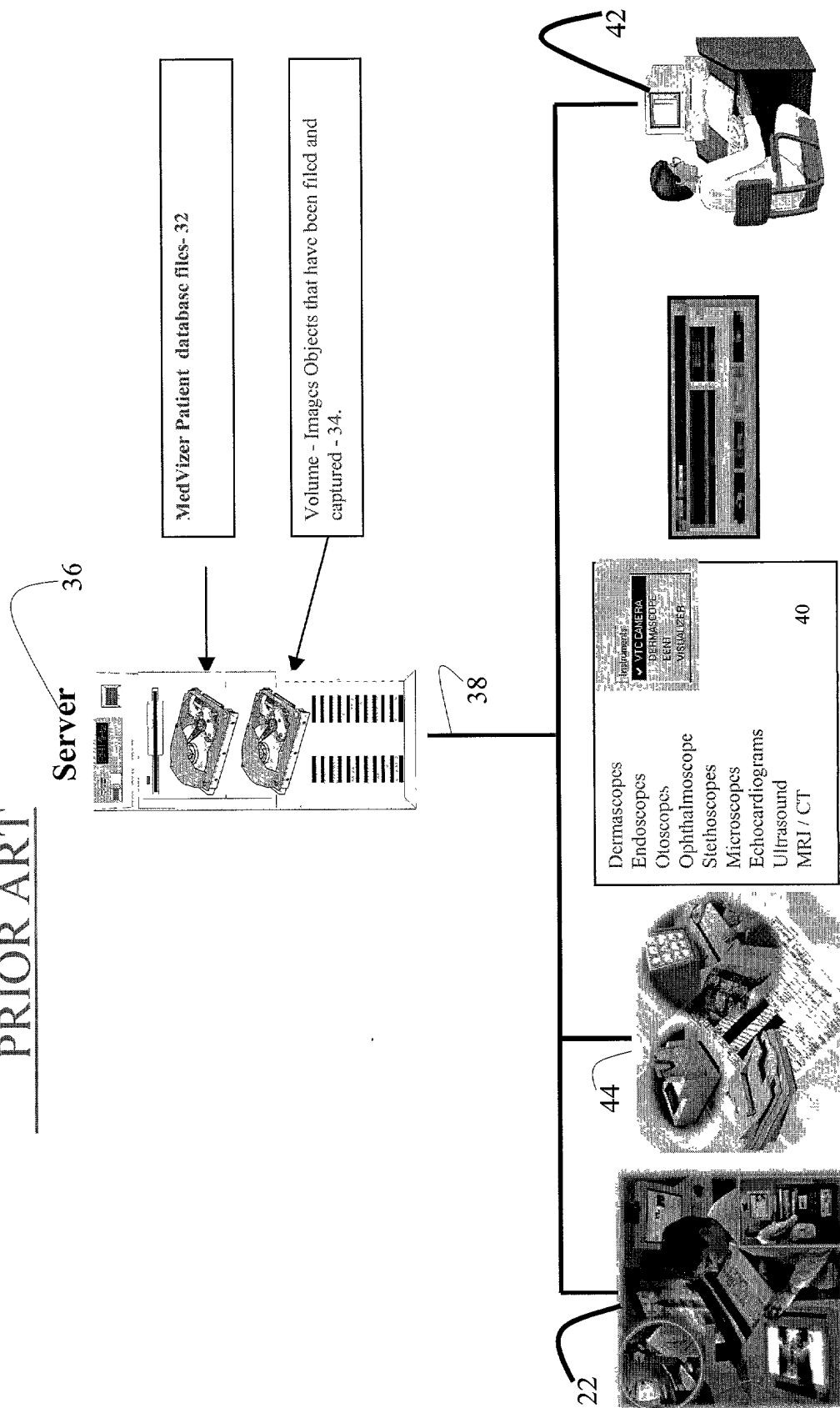


FIGURE 1 – PRIOR ART



Simple LAN Configuration – FIGURE 2

PRIOR ART



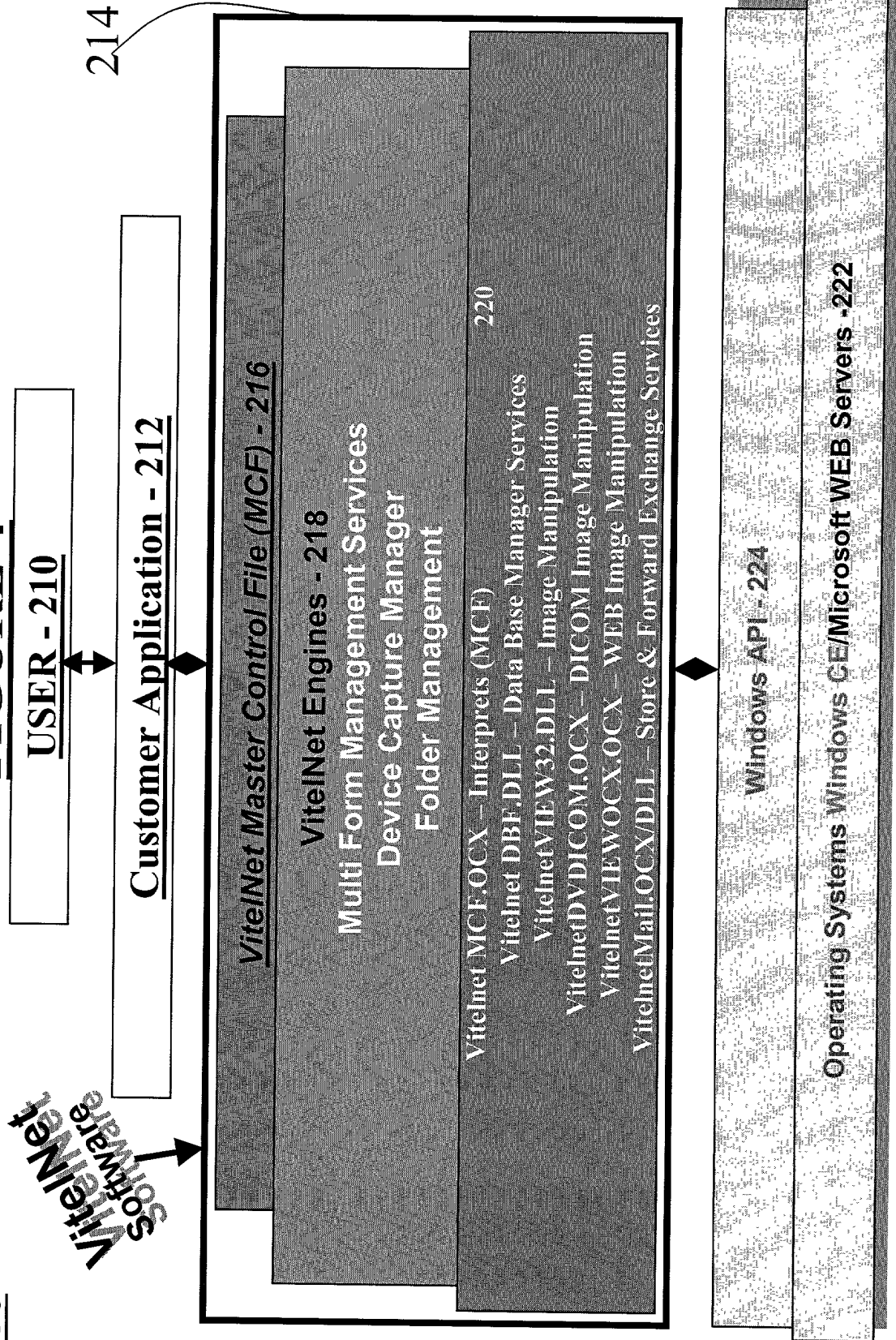
ViTel Net Application 112			
MNU 116	MCF 114	Database 118	
Visual Basic – VITEL NET ENGINE - 120			
Win32 API-122	OCX 124	DLL - 126	
Virtual Memory Manager -130	File System Manager - 132	Configuration Manager -128	
Kernel - 136			
Device drivers -138			
Hardware - 140			

FIGURE 3 –
PRIOR ART

VitelNet Application Architecture -

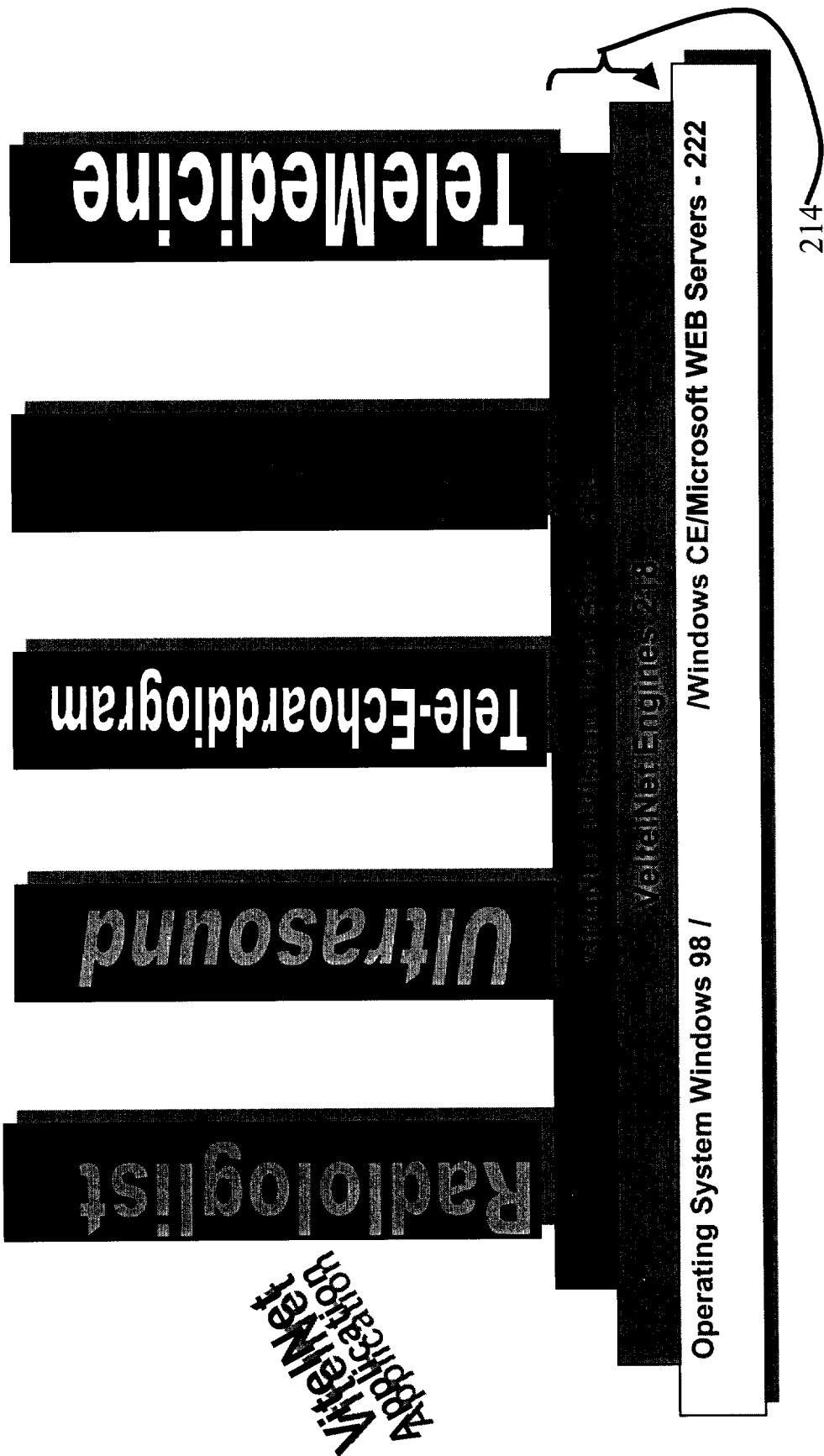
200

FIGURE 4



VitelNet Application Architecture –

FIGURE 5



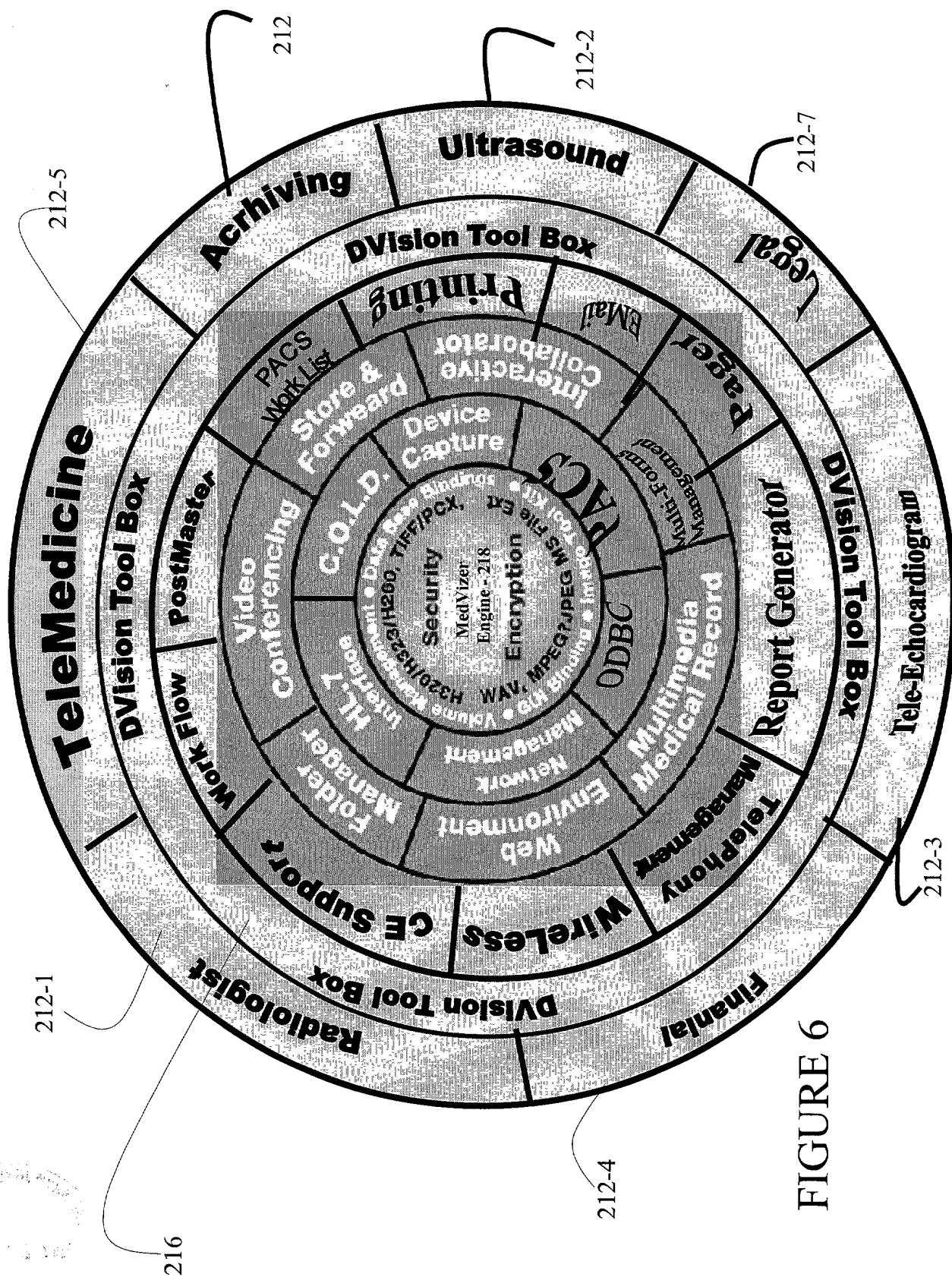
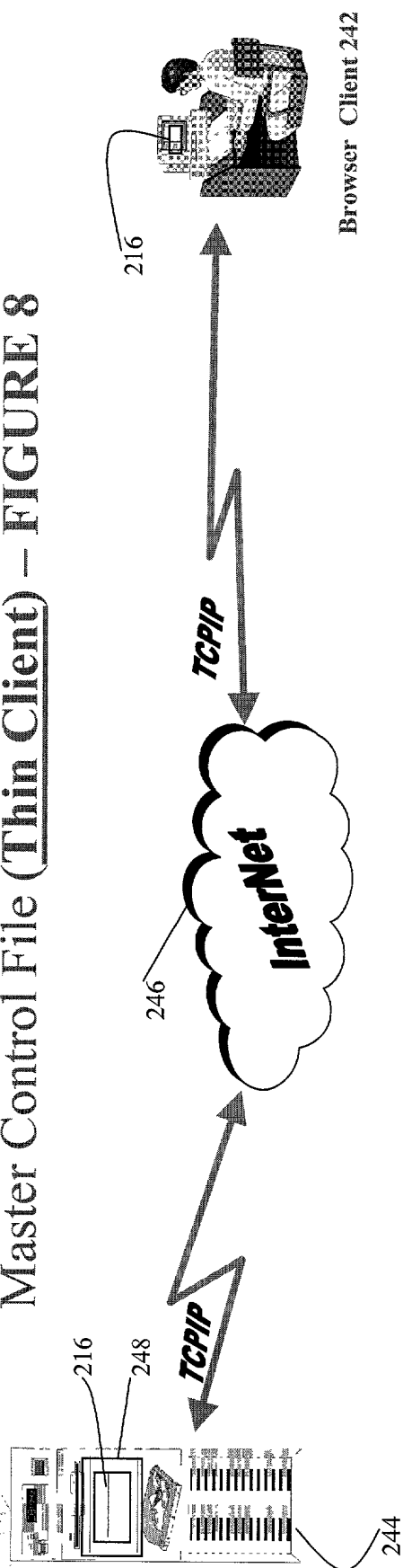


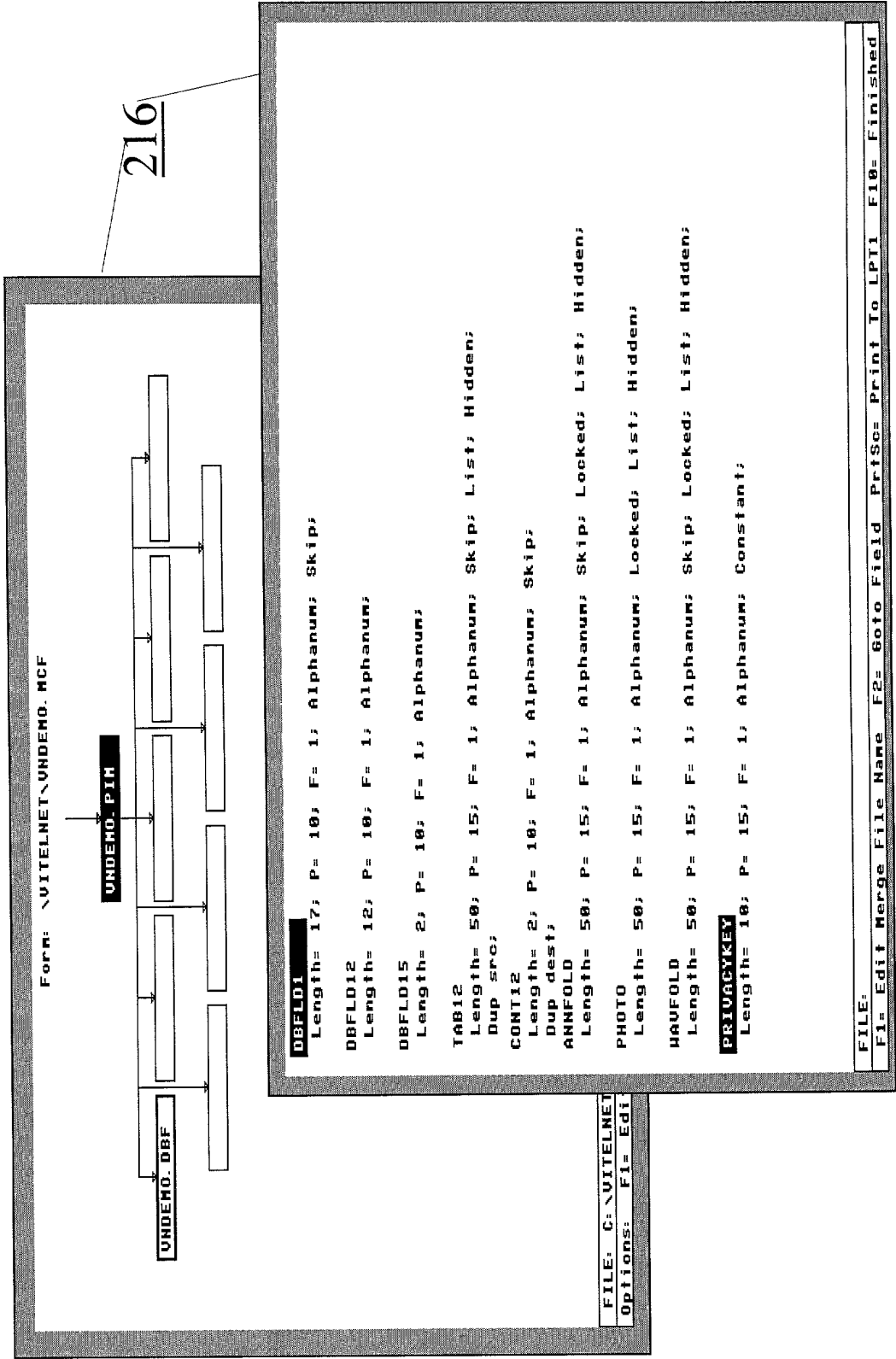
FIGURE 7

Applications - 212			
Division Toolbox (MCF) - 216			
230 Utilities	Printing Report Generator	PACS Worklist, Post Master, Email, Telephony Manager, Wireless, Workflow, Printing, Report Generator	Email, Telephony Manager, Wireless, Workflow, Printing, Report Generator
	Data Entry	Interactive Collaboration, Video Conferencing, Folder Management, Multiform Management, Multimedia Record, Store-and-Forward, Data Entry	Folder Management, Multiform Management, Multimedia Record, Store-and-Forward, Data Entry
232 Functions	Network Protocol	ADO, C.O.L.D., HL7, ODBC, PACS Communication Protocol, SQL, Device Capture, Network Protocol	Device Capture, Network Protocol
	Data Base Binding Image Processing DICOM, 12-Bit Images Security Encryption	Volume Management, Data Base Binding, Image Processing, DICOM (12-Bit Images), Security Encryption	Data Base Binding, Image Processing, DICOM (12-Bit Images), Security Encryption
234 Interfaces	Web Engine 218-2	WINDOWS 98, 2000, NT ENGINE 218-1	Pocket PC/WINDOWS CE ENGINE 218-3

Master Control File (Thin Client) – FIGURE 8



Master Control File (MCF) – FIGURE 9



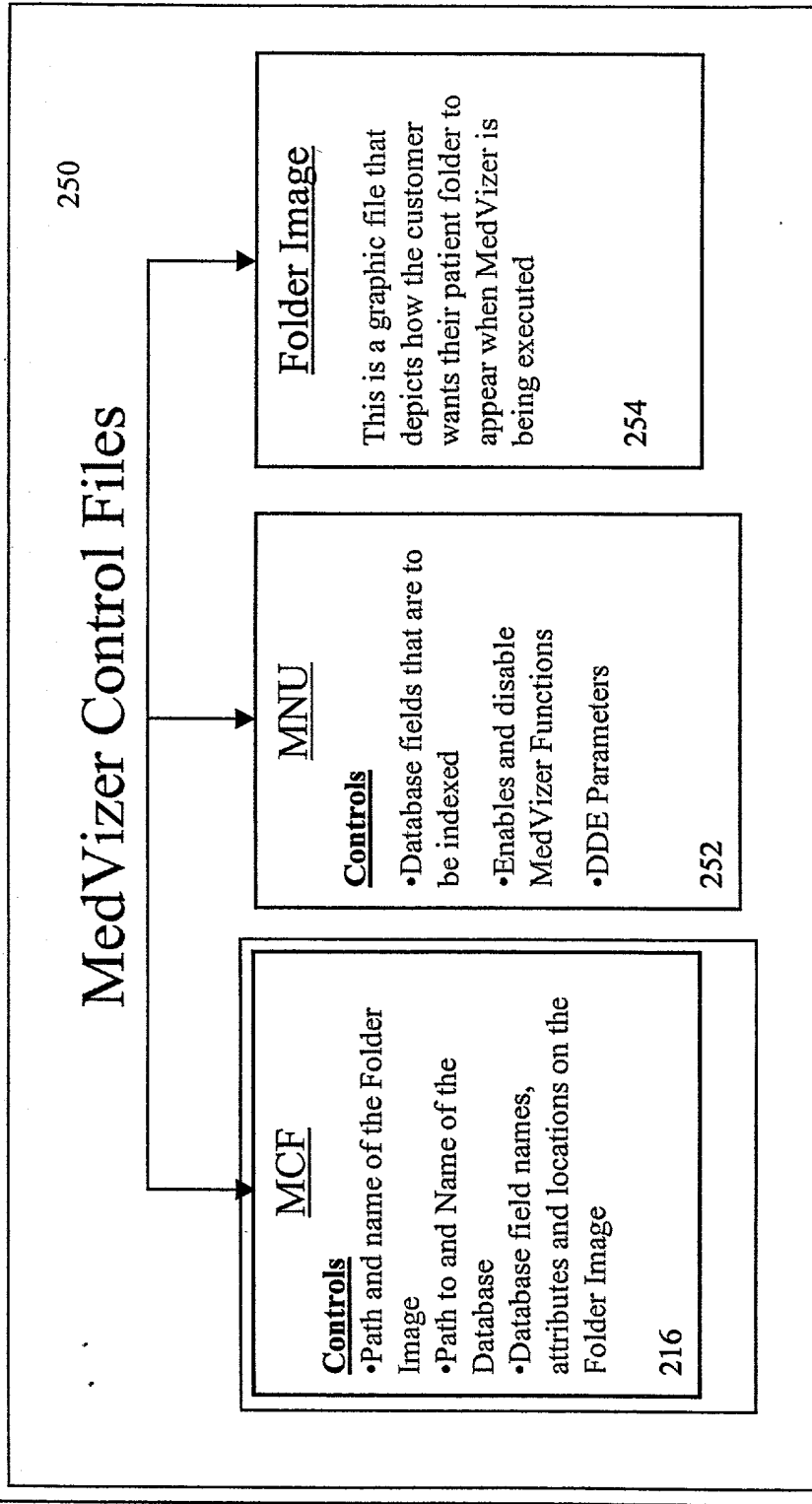


FIGURE 10

Server Side – Master Control File (Thin Client) – Figure 11A

DEFAULT.ASP

260

```

set DvMcf1=server.CreateObject("uDvMcf.DvMcf")
DvMcf1.McfName = "c:\Vitelnet\Vitelnet.mcf"
    '// Submit for the set of records in the db
RecordCount = DvMcf1.Submit(In & Chr(0) & mm & Chr(0) & ssm &
Chr(0))
If DvMcf1.RecordCollection.Count = 0 Then
    '//get the first set of records in db
    RecordCount = DvMcf1.Submit("'" & Chr(0) & "" & Chr(0) & "" & Chr(0))
End If
RecordsList.Clear
RecordsList.AddItem "Select from this list."

```

Client Side – Master Control File (Thin Client) – Figure 11B

PAGE1.ASP

262

```

Sub ViewOcx1_ScrollChange
Dim TmpStr,Ptr

if Tab <> "" then
    TabList.selectedindex = thisForm.ViewOcx1.ScrollIndex
    TmpStr = TabList.getValue(selectedIndex)
Else
    thisForm.ImageList.selectedindex = thisForm.ViewOcx1.ScrollIndex
    TmpStr = thisForm.ImageList.value
end if
"TmpStr = ImageList.getValue(thisForm.ViewOcx1.ScrollIndex)
Ptr = instr (1,TmpStr,")
If Ptr = 0 then
    exit sub
else
    thisForm.ViewOcx1.ShowImage = trim(mid(TmpStr,Ptr+1,len(TmpStr)))
end if
End Sub

```

FIGURE 12

Key <http://Vitelnet/Vitelnet> - 502

Receive VitelnetMCF, Vitelnet.MNU, Vitelnet.DBF,
DVDICOM.OCX, VITELNETVIEWOCX.OCX
C4.DLL, CVIEW32.DLL and DEFAULT PAGE
from the server - 504

Submit search criteria on DEFAULT.ASP page - 506

Receive search list from server side with
DEFAULT.ASP page - 508

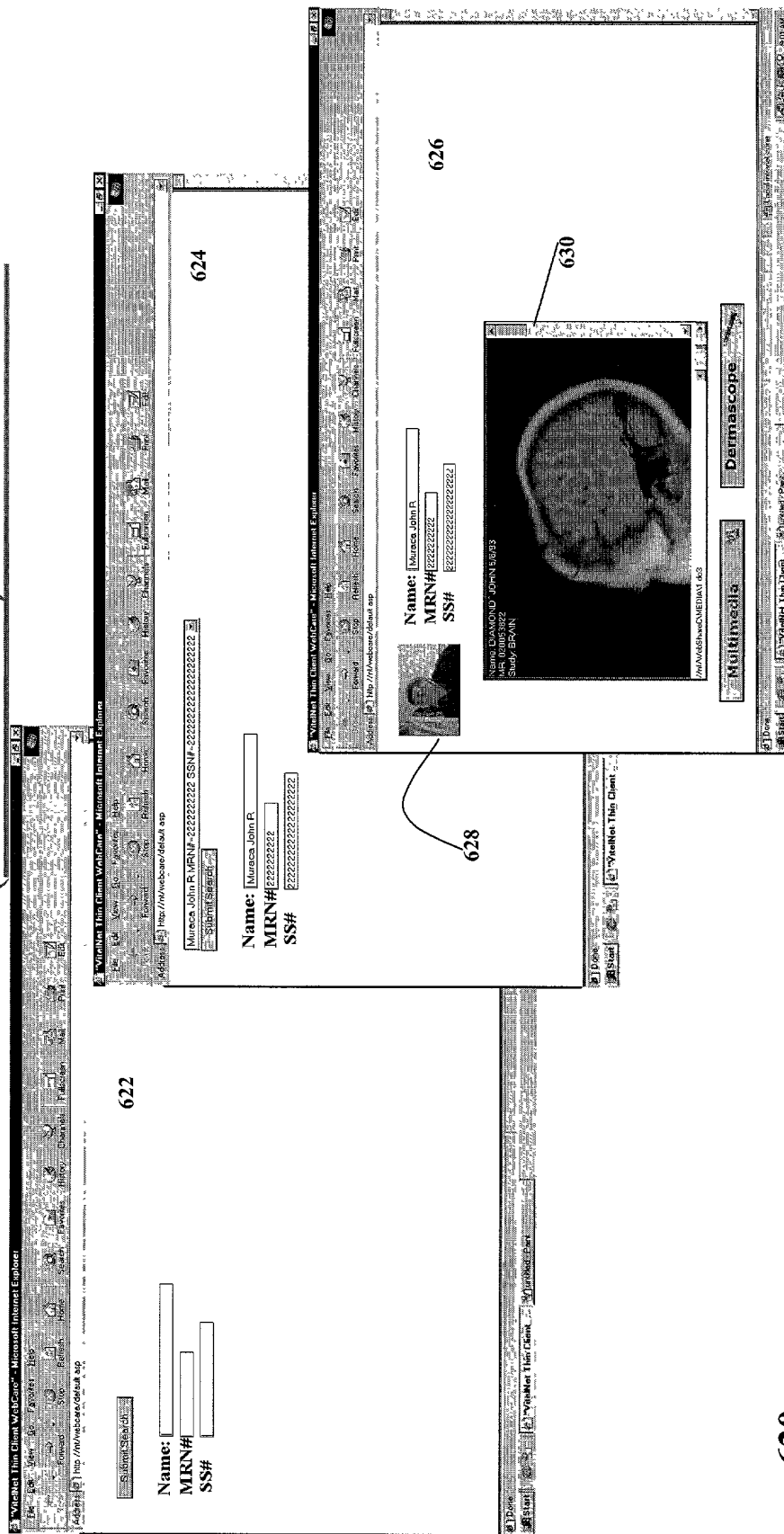
Select Patient from the DEFAULT.ASP PAGE search
results list - 510

Receive PAGE1.ASP page from the server - 512

View Patient folder images from PAGE1.ASP - 514

500

Master Control File (Thin Client) – FIGURE 13



Master Control File (Field Names)

[illegible]

642

File New Databases View

Database Field Name - Each field name will be retained and utilized by the MedVizer application when it populates and retrieves information.

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FIGURE 14

Master Control File (Database Pointer)

FIGURE 15

Pointer to and Name of the Database - This is database that the MedVizer application will populate and retrieve information from.

216

HEdit - MEDVIZER.mcd									
00000000	43	30	5C	40	65	64	76	69	70
00000001	5C	40	65	64	76	69	70	65	72
00000002	20	20	20	20	20	20	20	20	20
00000003	20	20	20	20	20	20	20	20	20
00000004	5F	00	00	00	00	00	04	00	00
00000005	00	00	00	00	00	00	CF	00	00
00000006	03	00	40	00	04	00	00	00	4C
00000007	00	00	7E	09	9E	01	1E	00	00
00000008	0F	03	00	40	04	00	00	00	00
00000009	00	00	00	00	7E	09	4E	03	1E
0000000A	01	0F	03	00	00	00	04	00	00
0000000B	00	01	0F	03	00	00	00	00	00
0000000C	4E	54	49	44	00	00	7E	09	00
0000000D	00	00	01	0F	01	00	40	01	04
0000000E	00	00	01	0F	01	00	00	00	00
0000000F	00	00	00	00	00	00	00	00	00
00000010	00	00	00	01	00	00	00	00	00
00000011	00	00	00	00	00	00	00	00	00
00000012	00	00	00	00	01	00	03	00	00
00000013	43	55	50	41	54	49	4F	4E	00
00000014	00	00	00	00	00	01	0F	03	00
00000015	53	54	41	54	55	53	00	00	00
00000016	00	00	00	00	00	00	01	0F	03
00000017	52	45	53	49	44	45	4E	43	45
00000018	00	00	00	00	00	00	00	01	0F
00000019	00	52	45	53	49	44	45	4E	43
0000001A	32	00	08	00	00	00	00	00	01
0000001B	00	00	50	48	4F	4E	45	00	00
0000001C	11	0F	00	00	00	00	00	00	00
0000001D	00	00	43	52	45	41	54	45	00
0000001E	8C	13	00	00	08	00	00	00	00

80

Field Name: **HOSPITAL**
Field Length: **25**
Field Type: ☒ AlphaNumeric
☐ Number Only
☐ Date
☐ European Date
☐ Auto Fill Date
☐ Entry Required

Tab Order: **59**
Font Size: **8**
Border Style: ☒ None
☐ Single
Field Use:
☐ Image List
☐ MCF Link
Field Display:
☐ Inverse
☐ Skip
☐ Locked

Field Fill:
☐ Constant
☐ Auto Increment
☐ Dup Field
☐ Dup Field as Field

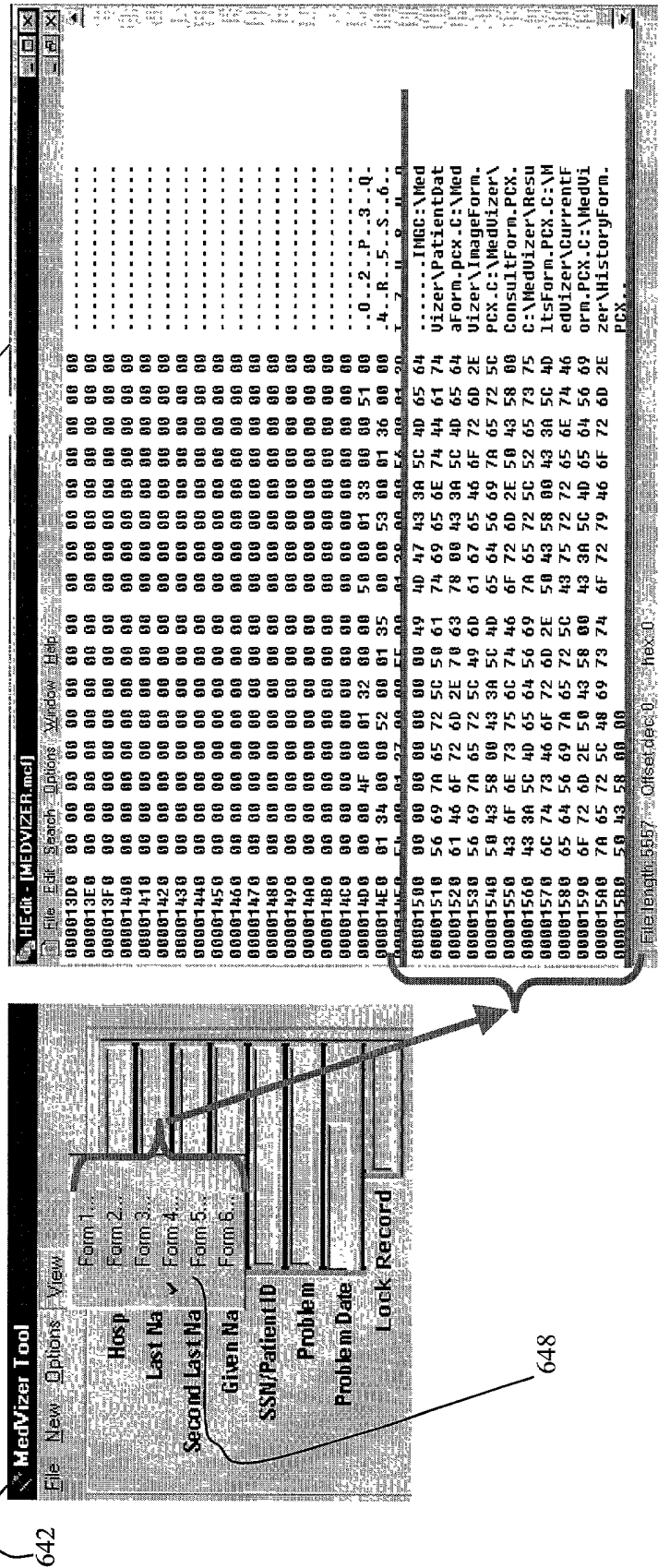
☒ Lookup
☐ Edit
File Name: **C:\medvizer\lookup\HOSPITAL.txt**
Caption: **Hospital**
☐ Only put Code Numbers in Database

Database: **C:\medvizer\VBFS\medvizer.DBF**

Master Control File (Multiple Forms)

FIGURE 16

Pointer to and Name of Graphic Image(s) - This is the image(s) that displays when the MedVizer application is executed.



642

Database Field Location - This is the top X Y coordinates that define the location that the database field will be displayed on the Graphic image when the MedVizer application is executed.

Database field attributes (Field Length, Alpha/Num, Numeric Only)

Auto fill when database record is created.

Auto fill when database record is modified.

Fill from keyboard.

Image List – Stores list of archived documents maintained and displayed from this field

MCF Link – Points to another MCF

Invisible - Field data is not displayed

Constant -Data is auto entered with a constant

Skip – Prevents from anchoring cursor on field.

Required - Data must be entered into this field

Lock – Prevents user from entering/changing field content.

Font - Defines font selection for this field

Tab Order – Sets the tabbing order when Tab key is pressed.

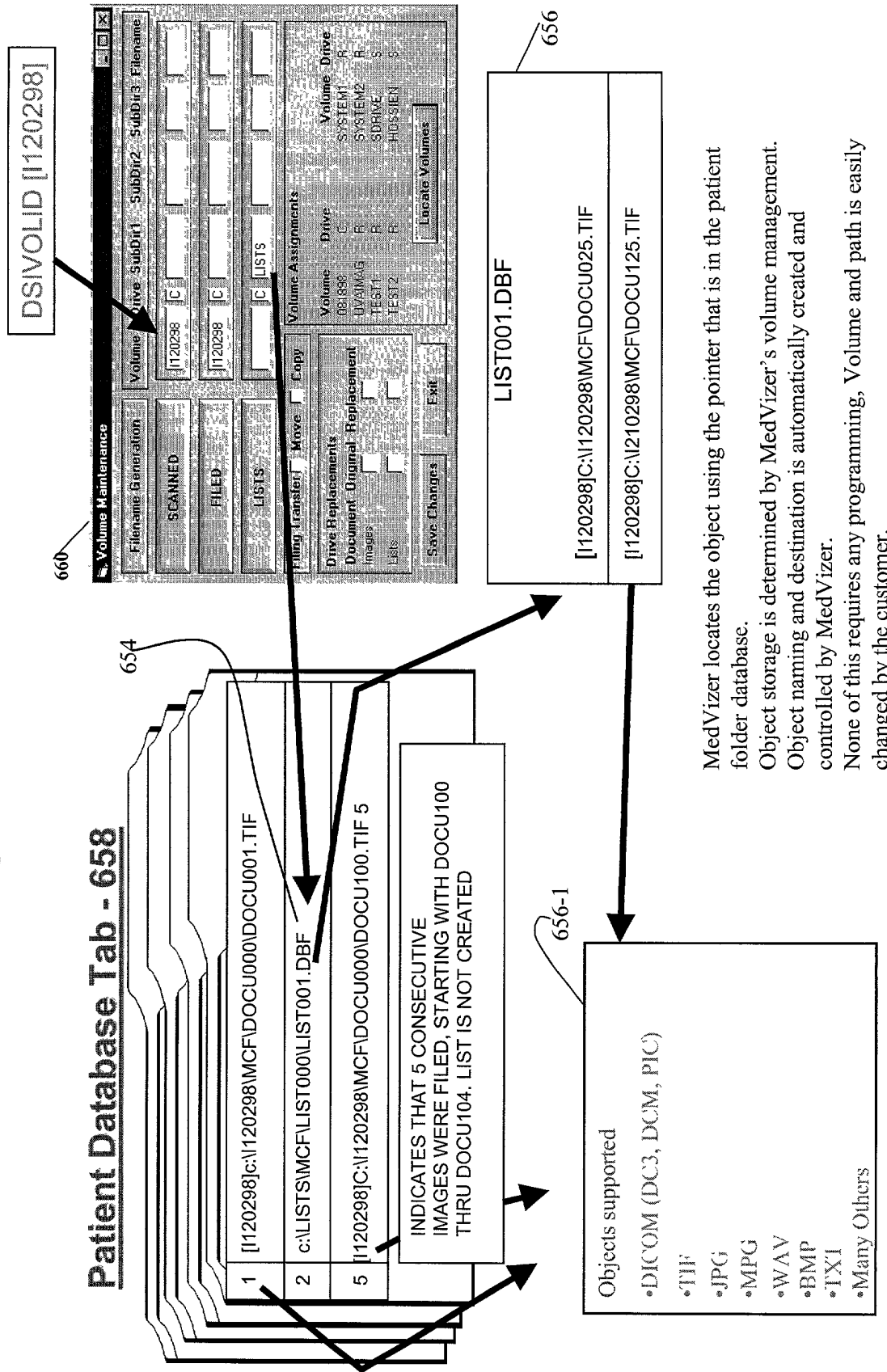
[illegible]

216

640

C:\witelnet\MEDIA\ultrasound worksheet.jpg	SAVETIF	video	5/8/00	#4.1	4:30:28
C:\witelnet\MEDIA\bloodst.tif	SAVETIF	video	5/8/00	#4.1	4:18:06

MedVizer Object Storage/Retrieval – FIGURE 19



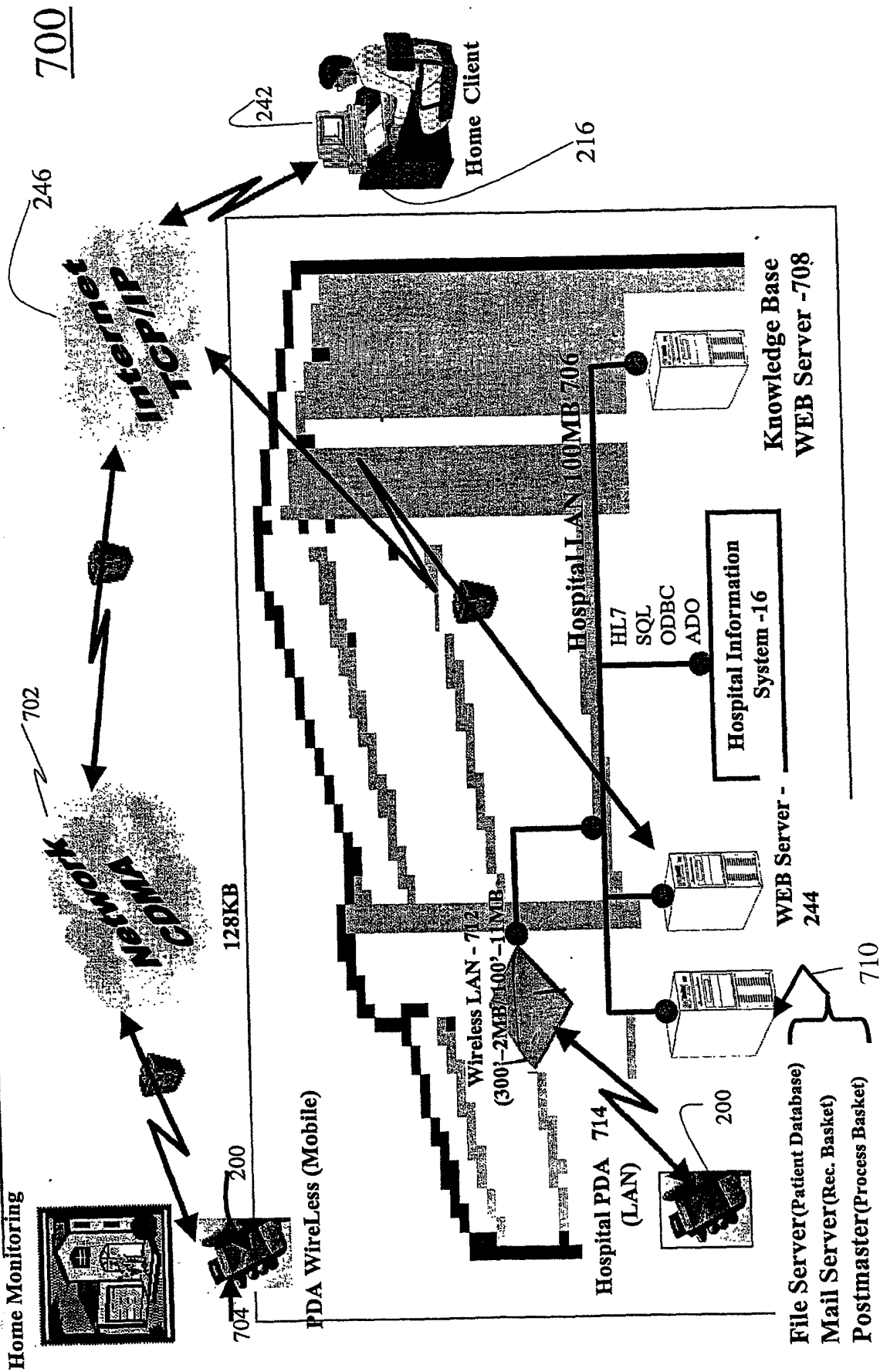
MedVizer locates the object using the pointer that is in the patient folder database.

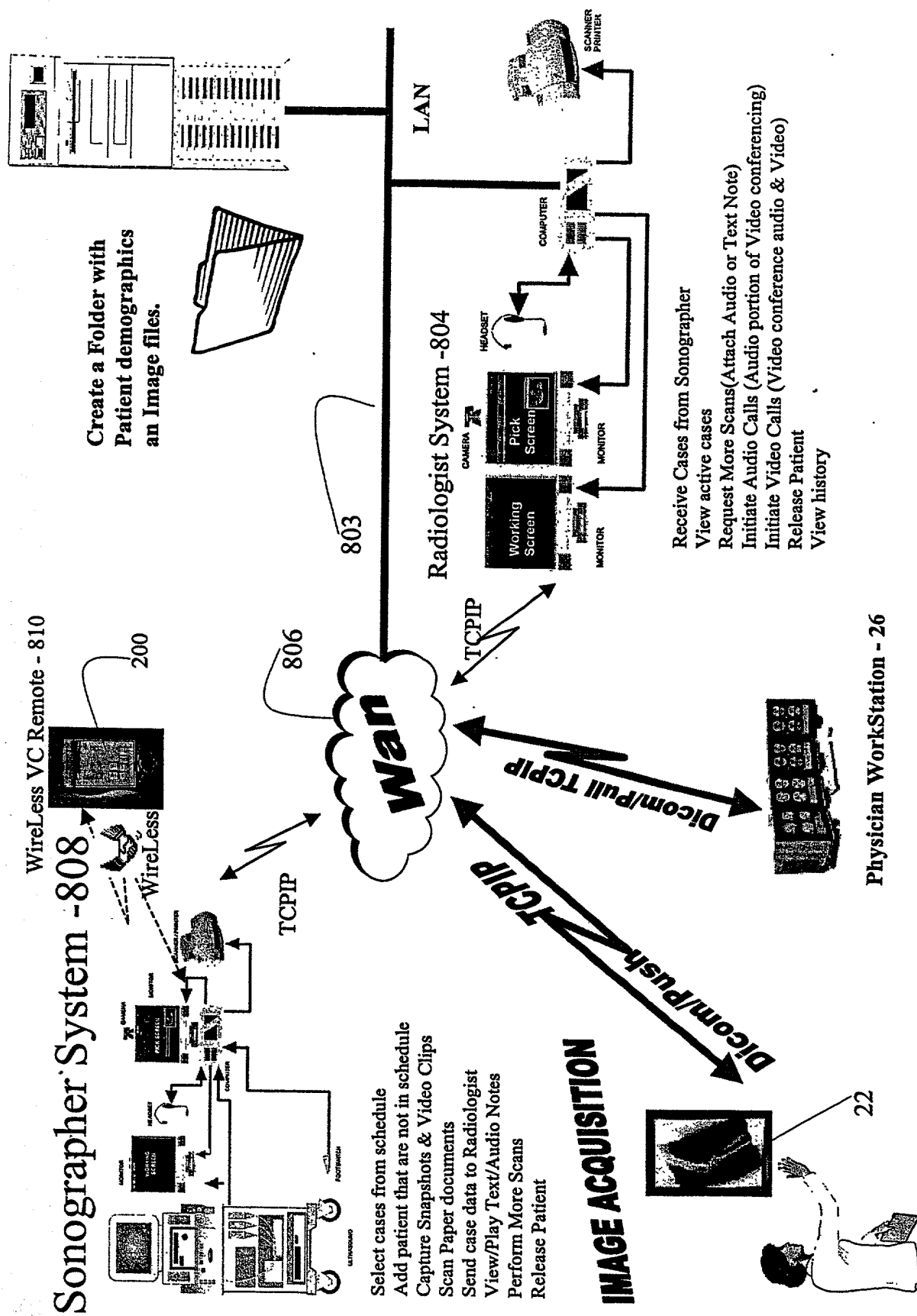
Object storage is determined by MedVizer's volume management.

Object naming and destination is automatically created and controlled by MedVizer.

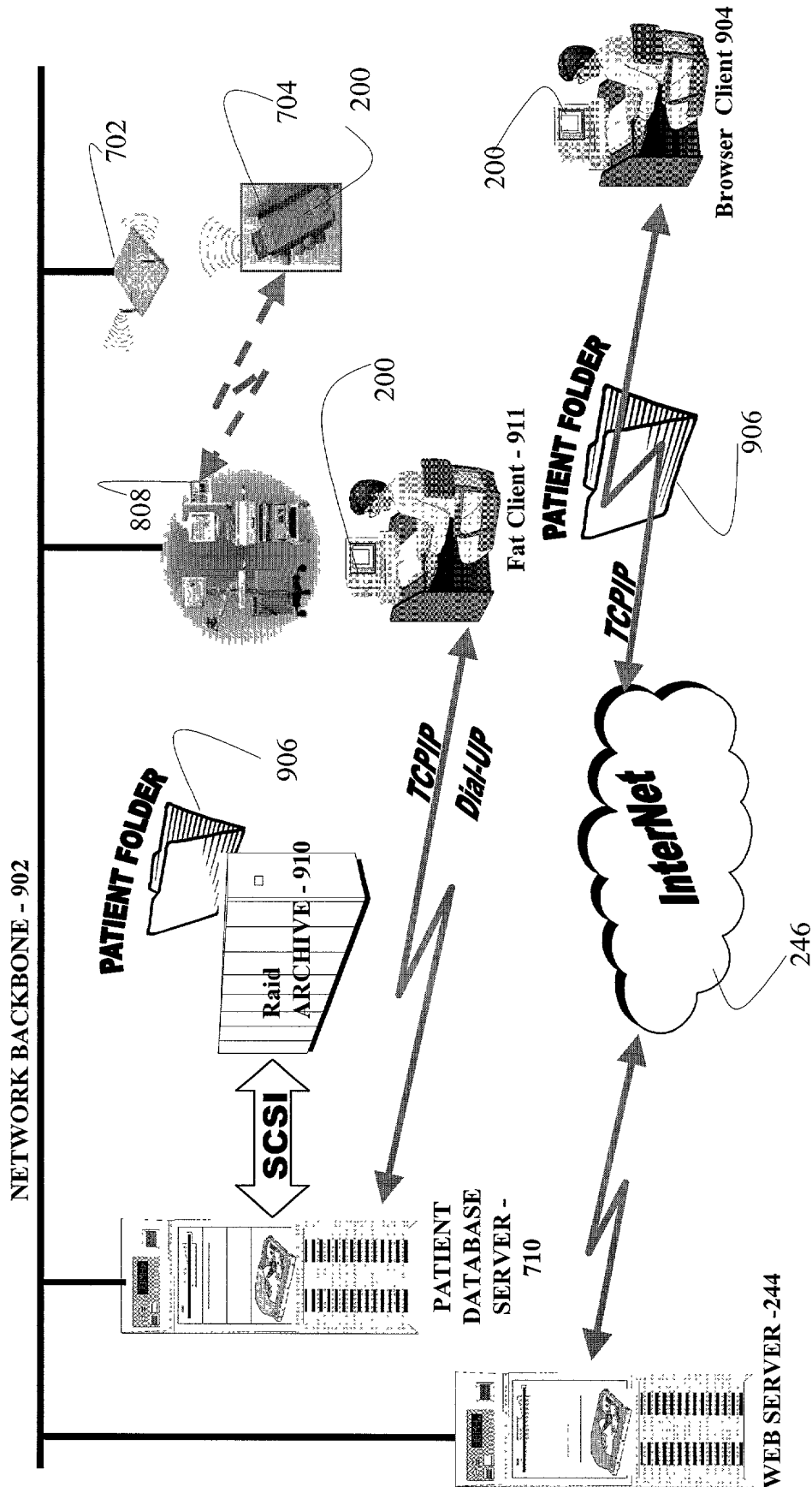
None of this requires any programming, Volume and path is easily changed by the customer.

Secure Wireless Telemedicine Enterprise System - Figure 20

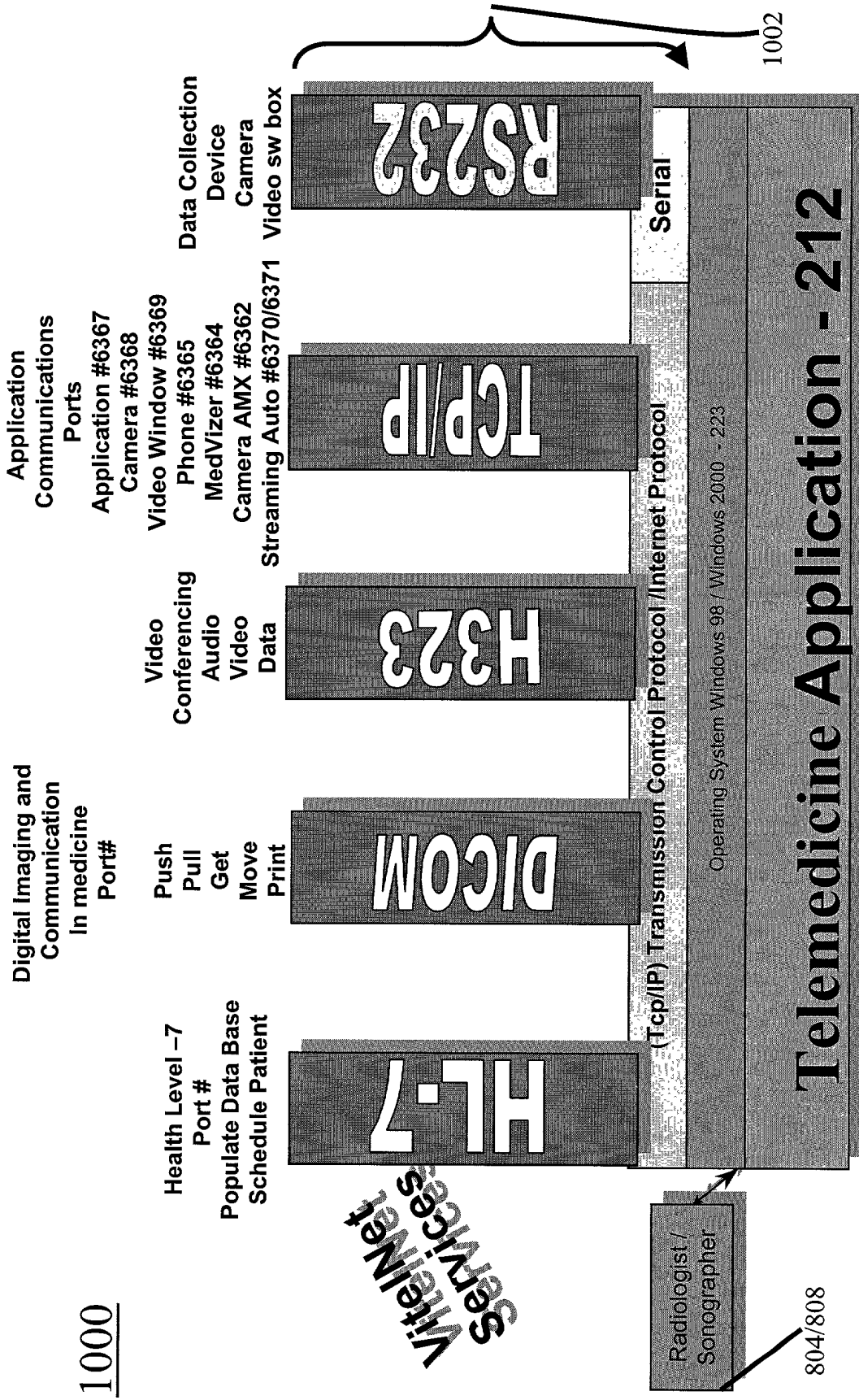




ViTel Net Telemedicine System – FIGURE 22

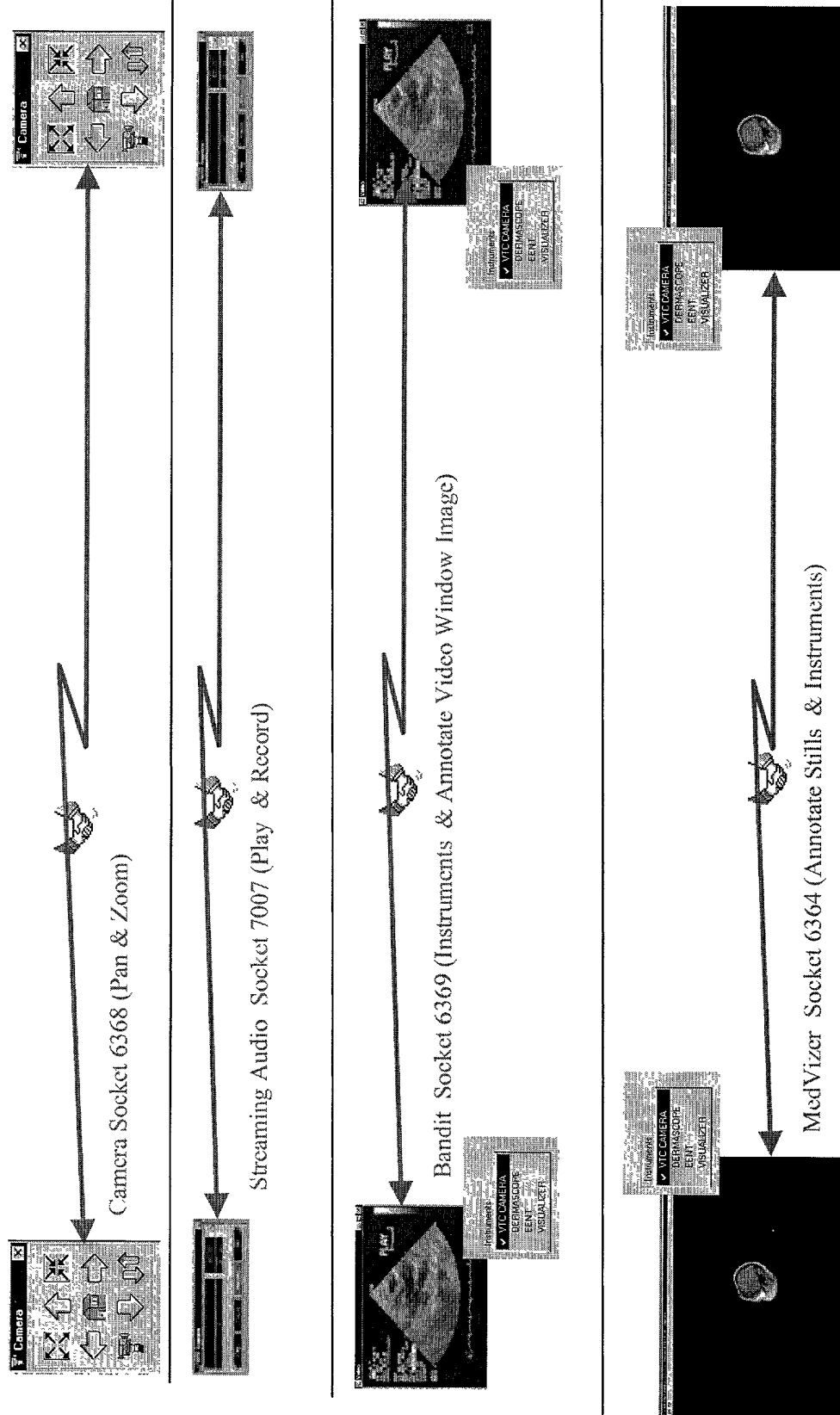


VitelNet Communications Architecture
- FIGURE 23



Remote TCP/IP Functions – FIGURE 25

1200



VNET/MedVizer Software – FIGURE 26

1210

ViTelNet

Video Capture

C:\VN\VNET.EXE
C:\VN\Controls.exe

C:\BANDIT\Bandit.EXE
C:\BANDIT\Bandit.ini
C:\BANDIT\Phone.exe
C:\BANDIT\Phone.ini
C:\BANDIT\Phonebk.ph
C:\BANDIT\Remote.exe
C:\BANDIT\Vitelcon.exe

MedVizer

C:\DV\Dv.exe
C:\VITELNET\VNDEMO.MCF
C:\VITELNET\VNDEMO.MNU
C:\VITELNET\BMPS\VNDEMO.INI

VNET/MedVizer INI File – FIGURE 27A

[Medvizer] Caption=VitelINK lang=	Caption that appears in the VNET title bar lang=eng Specifies english language is to be used lang=spa Specifies Spanish language is to be used
phpath="c:\bandit\PHONE.EXE @PhoneBook;c:\bandit\joe.ph; \VCON"	Used by VNET to determine the location and command line associated with the phone book.
phtopic=Phone\Book	Used by VNET to determine the phone DDE topic
dvpath=c:\dv\dv.exe c:\VITELNET\VNDEMO.mcf /hide	Use by VNET to determine the location and command line associated with DV
dvtopic=DV\Division	Used by VNET to determine the DV DDE topic and is used in the DDE initialization process. This is also used during the DDE conversations between applications.
LinkItem=Dvision	Used by VNET as part of the DDE initialization. This is also used during the DDE conversations between applications.
bandit=yes	Flag used to load bandit. Placing a ' at the beginning of this command disables loading of bandit
bdpath=c:\bandit\bandit.exe /HIDE /debug /enabledde /W /dv /optibase	Used by VNET to determine the location and command line associated with BANDIT. Command line parameters include;
	/HIDE - loads the application and hides it.
	/debug - turns debug on
	/enabledde - enables bandit to conduct dde conversations. This must be part of the command line when using the socket /W parameter.
	/W - enable sockets
	/Optibase enables MPEG encoding from the bandit window.
bdtopic=bandit\bandit	Used by VNET to determine the BANDIT DDE topic and is used in the DDE initialization process. This is also used during the DDE conversations between applications.

VNET/MedVizer INI File- FIGURE 27B

1300

;Control panel for amx

ctpath=c:\vn\controls.exe /c1 /hide /w

cttopic=controls\controls

Used by VNET to determine the location and command line associated with BANDIT.

Used by VNET to determine the Controls DDE topic and is used in the DDE initialization process.

This is also used during the DDE conversations between applications

exit!=yes

When set to yes the video conferencing software will exit without prompting the operator. When this command is disabled a prompt will be presented to the operator prior to exiting.

remdrive=v:

This is the drive letter that will be assigned and mapped when connecting to a remote system.

remcom=2

This is the com port assigned to the camera or the AMX controller is connected to.

[Menu]

Show=NO

Controls the displaying of the VNET button bar. When this command is disabled the menu bar will display. When enabled and No follows the equal sign the menu bar will not be displayed.

AOtop=NO

Always On Top - is used to specify if the button bar is always on top are if another form can be displayed over it. When this command is disabled the button bar will always be on top. When enabled the button bar can be covered by another form.

[ports]

@Udp=6366

Broadcast Socket

@Net=6367

VNET to VNET Socket

@Cam=6368

Camera Socket

@Ban=6369

Bandit Socket

@Phn=6365

Phone Socket

@Dvp=6364

MedVizer Socket

@Hcp=6363

Health Socket

@Ctl=6362

Camera Controls AMX

@Spc=6370

Streaming Player Client

@Sps=6371

Streaming Player Server

MedVizer MNU File – FIGURE 28A

WINDOW HEADING Definition - Enter heading to display at top of window.

! VITel Net DEMO

COLUMN HEADING Definition - Enter heading to display over search fields.

!Sequence No Patient ID SS#

PROMPT LINE Definition - Enter prompt message for user to act on.

!Enter Search Information

FIELD NAME Definitions - Enter Field definitions as follows:

Name,Position,Length,I - "I"=Indexed field (optional)

@DBFLD11,1,28,I

@DBFLD21,18,25,I

@DBFLD20,44,11,I

The following specifies the drive letter that basket will be transferred to.

[NIWOT]

_NIWOTCOPY_V_DV_DV_

The following commands enable MedVizer functions and
ICONS

EXIT

LOCATE

NEXTREC

PREVREC

FIND

ASK

ADDREC

PickDocument

FILEDocument

CloseOnExit

VideoConferencing

RECORDWAVE

Scan

TwainDevice

MainStrRec

Main View

VolGen

SavePostion

volgen

savepostion

MedVizer MNU File- FIGURE 28B

Location and size of the MedVizer Patient Folder

Top_ 690_
Left_ 4200_
Height_ 10830_
Width_ 9960_

The following specifies the tab that a specific file is capture to.

.TIF_Tab1_
.WAV_TAB5_
.JPG_Tab2_
.AVI_Tab4_
.ASF_Tab3_

The following turns the list thumbnails on and specifies the size of the thumbnail.

[ThumbNail]
Enable=YES
THUMBNAIL_32_24_

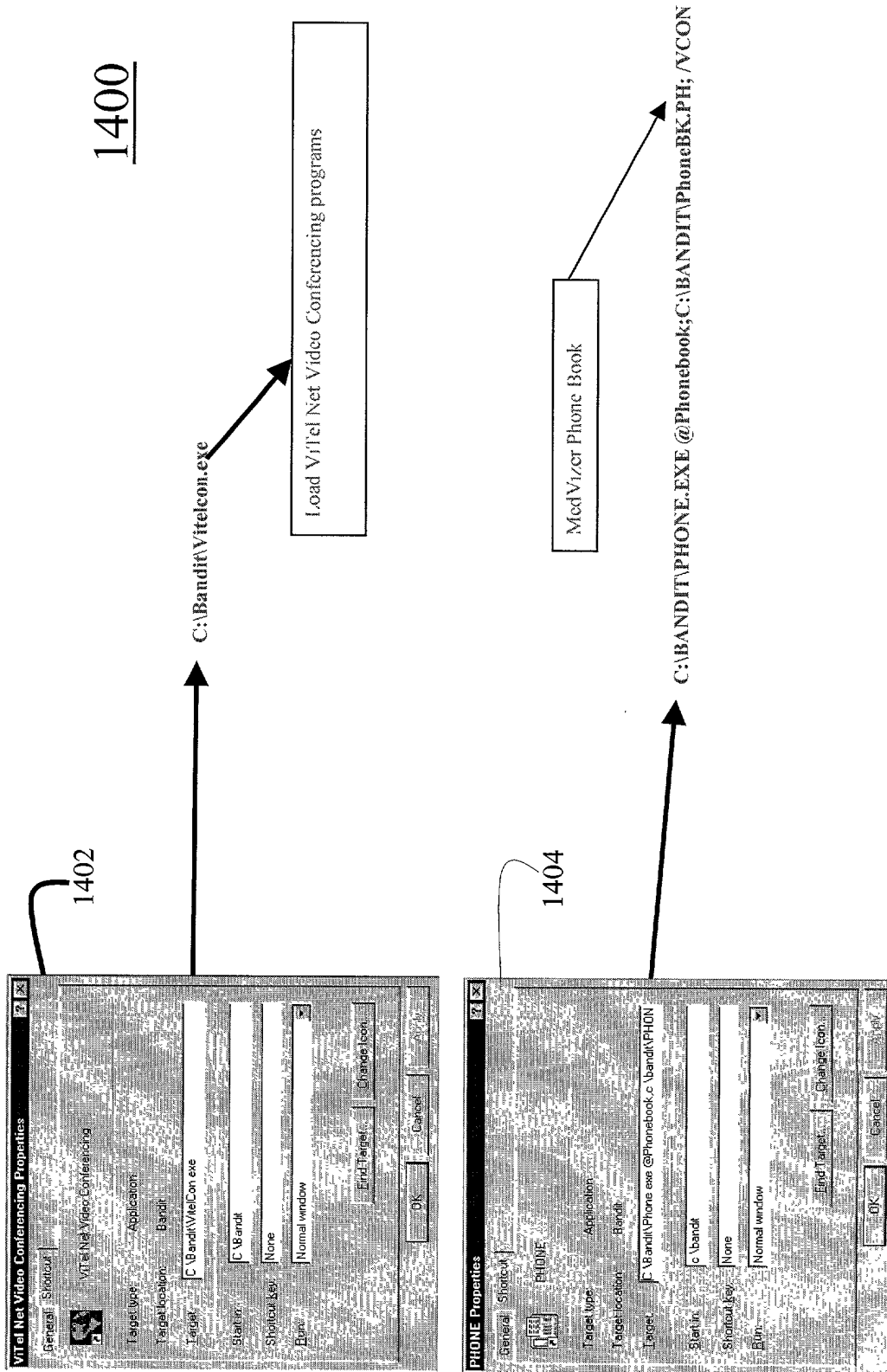
The following lines are related to MedVizer's Volume management

DOC_R_VNDEMO__AUTO__
LST_R_VNDEMO__AUTO__
PTH_
PTH_
PTH_
CPY_R_VNDEMO__AUTO__

[

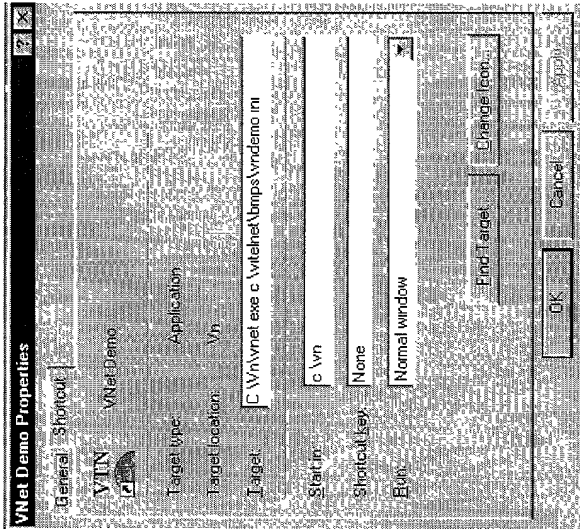
TOOL]
XRAY=ACCUSOFT
NUMXRAYS=9
THUMBWIDTH=80
THUMBHEIGHT=100
THUMBBCOUNT=6
THUMBSPACE=20
THUMBFRAME=15
THUMBROWS=2
TOOLBARS=SMALL
AUTOVIEWRATE=10
MAGSMALL=100
MAGMEDIUM=200
MAGLARGE=300
MAGMAG=2
MENUHEIGHT=16
MENUFONT=8
SCANDPI=75
SCANBITS=8
SCANOPT1=75
SCANOPT2=150
XRAYBCOLOR=00000000
SHOW=YES
DATABASE=R:\VITELNET\VNDEMO.dbf

System Start Up Group – FIGURE 29



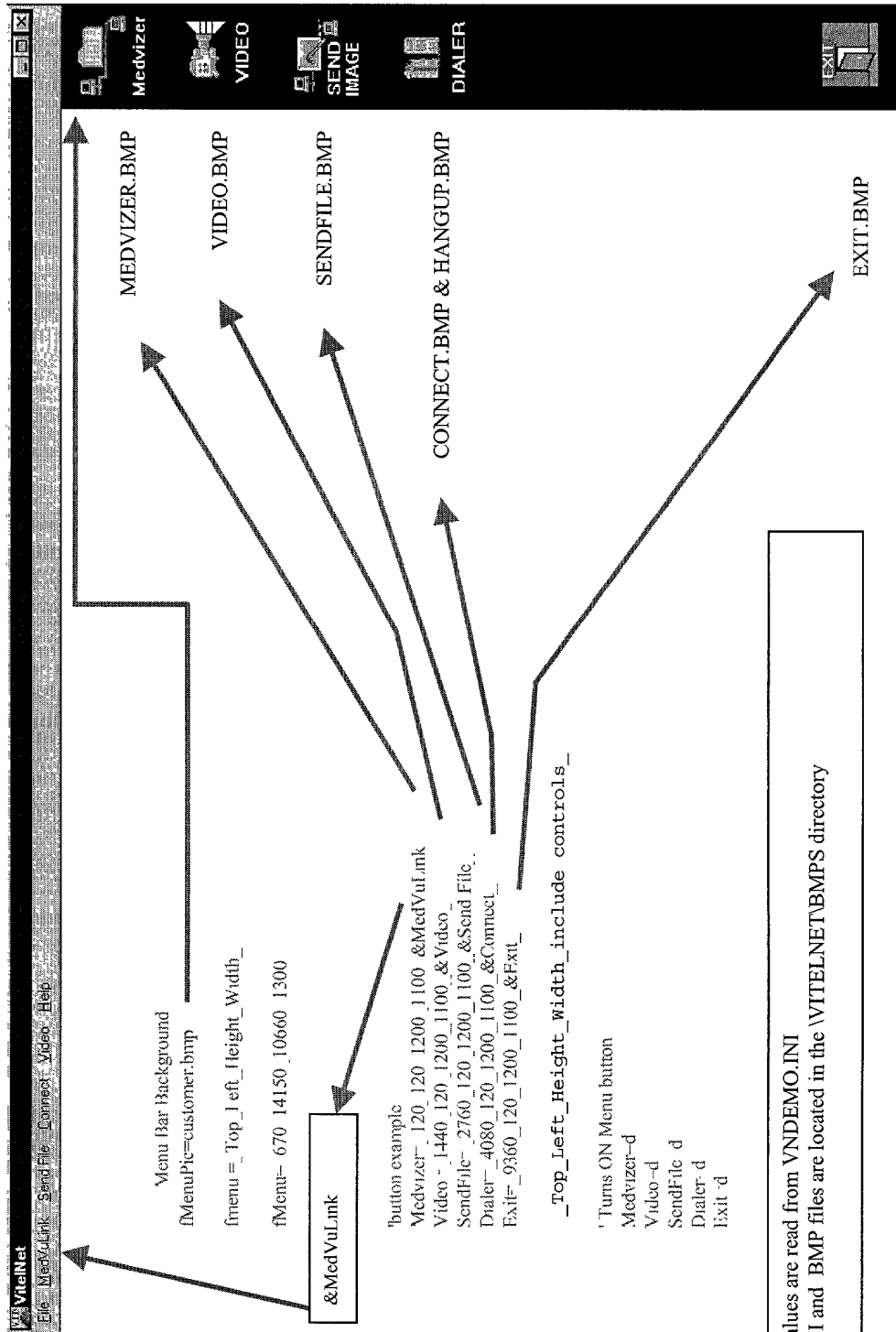
VNET Properties – FIGURE 30

1500



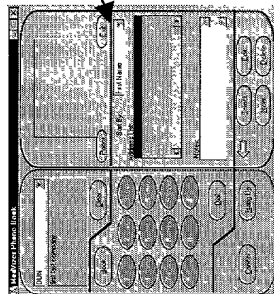
- Initializes the system based on information acquired from the VNDEMO.INI file.
- Configures the Desk Top
 - Creates Menu Bar
 - Size and location
 - Buttons (BMP files located in \VitelNet\BMPS directory
- Establishes MedVizer Window size and location
- Loads MedVizer (DV.exe)
- Loads Bandit.exe
- Established DDE links
- Controls program interaction

VNET Desktop – FIGURE 31



MedVizer Phone Book- FIGURE 32

1700



Exit - unloads the MedVizer Phone book

These entries will appear in the address list

A larger screenshot of the MedVizer Phone Book application. A box labeled 'These entries will appear in the address list' points to the 'Add' button in the top left corner. The application window contains several input fields: 'First Name', 'Last Name', 'Cellular', 'Title', 'Notes', 'Phone', 'Fax', 'Email', 'Pager', 'DUN Address', 'Network Address', 'Logical Name', 'Access Method', and 'No. of ISDN channels'. Arrows from other boxes point to these fields.

Email and Pager address (place email address in the pager box for those individuals that do not have a pager address)

Name of the Dial-Up Networking ICON that is used to place the call

IP address of the system being called

Hospital-1 \Hospital-1 \Hospital-2

computer name being called

share drive name

Your share drive name

Each phone book entry must also appear in the HOSTS and LMHOSTS file

Default Logical Name - This can be left blank if the computer name and share drive name are the same and it appears in the First Name text box.

Volume Information & Generation – FIGURE 33

1800

Volume Maintenance

Filename Generation

Volume Drive SubDir1 SubDir2 SubDir3 Filename

SCANNED

FILED

LISTS

Filing Transfer Move ☒ Copy

Drive Replacements Document Original Replacement Images List

Save Changes Exit

Volume Assignments

Volume Drive Volume Drive

Locate Volumes

Move file from source to destination
Copy source file to the destination

Current Volume name and path to captured images and filed images. Additionally the List line is the path to the list database files.

Locates online volumes

Volume Generation

VOLUME NAME

VOLUME DATE

DRIVE SELECTION

VolumeName

DESCRIPTION

AUTHOR

Required

Optional entries

Required

Ok

Cancel

FIGURE 34A

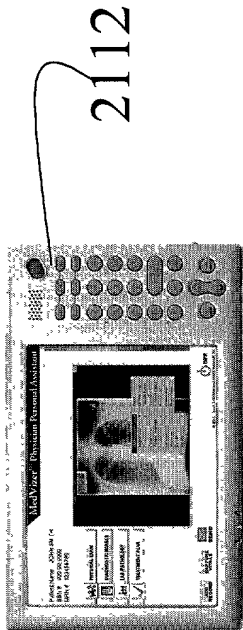
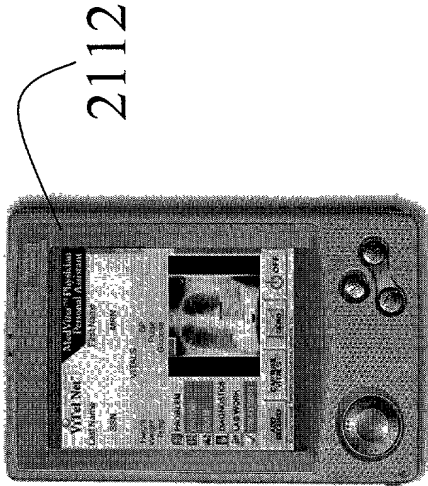


FIGURE 34B

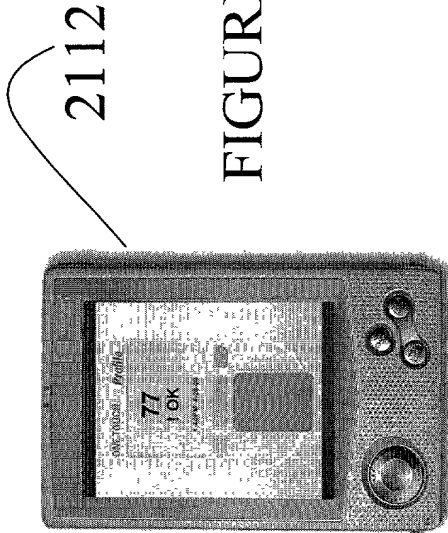
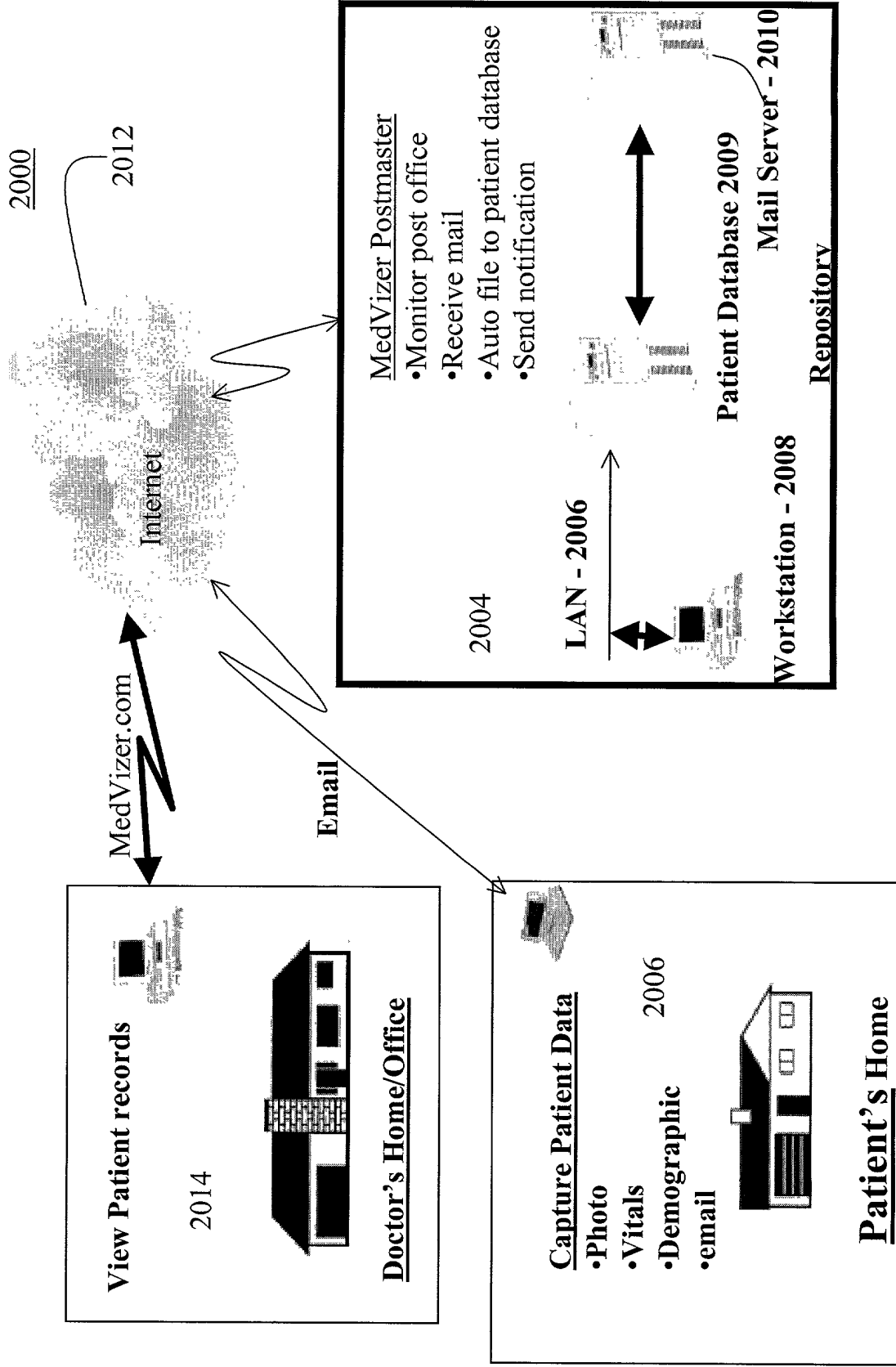
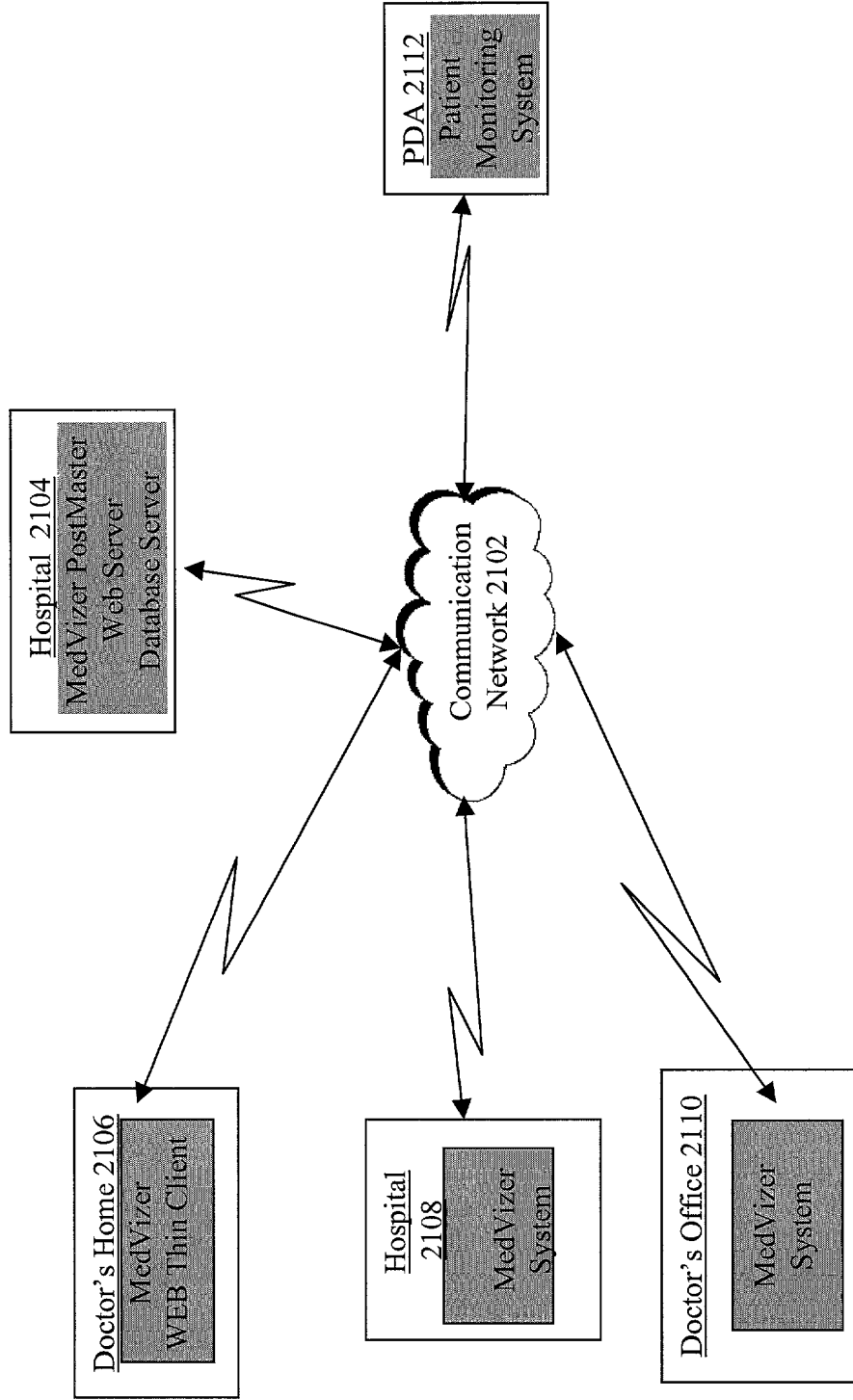


FIGURE 34C

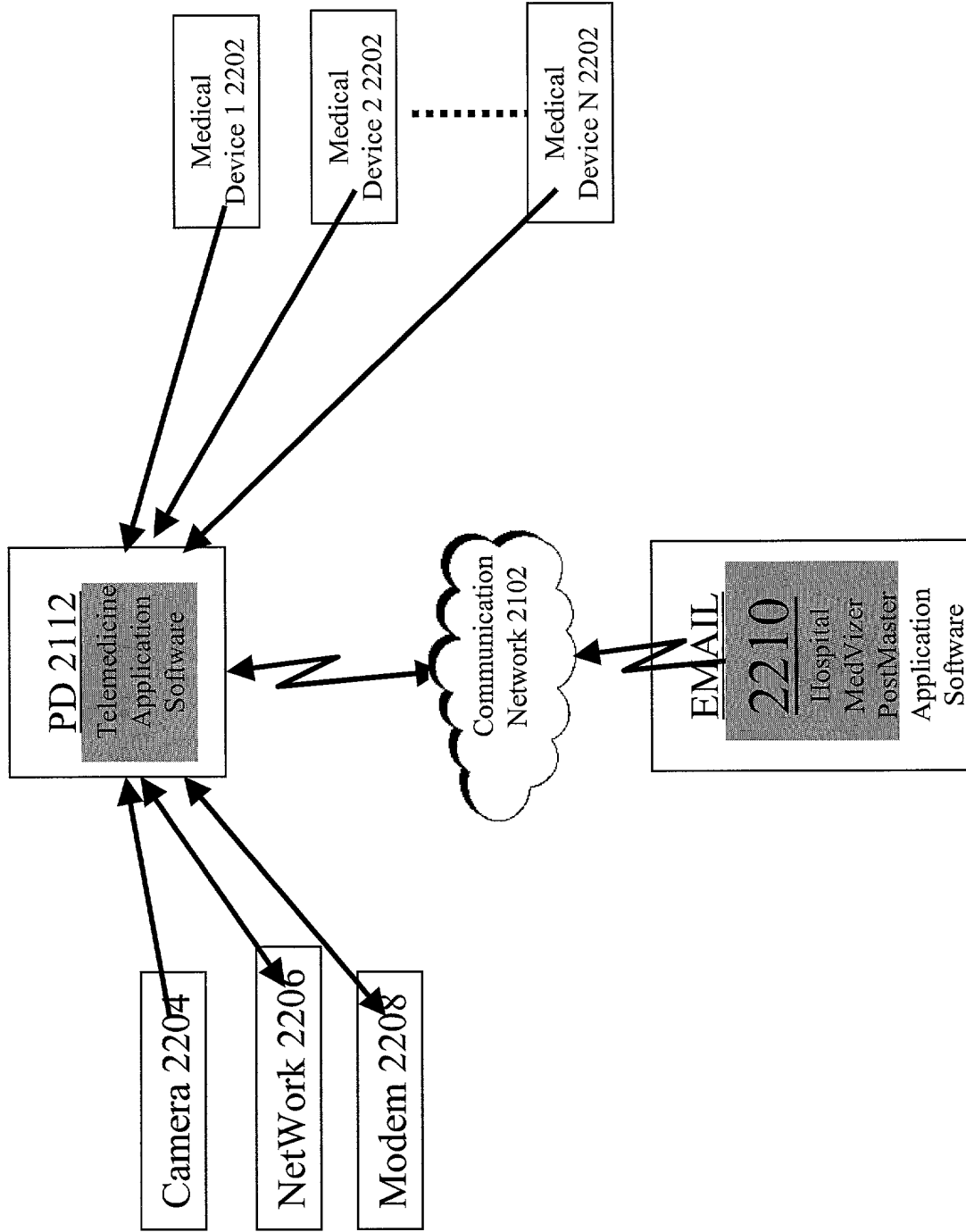
Global Medical Records System – FIGURE 35



PD Complete Home Monitoring System – FIGURE 36



PD Home Monitoring System – FIGURE 37A



PD Complete Home Monitoring System – FIGURE 37B

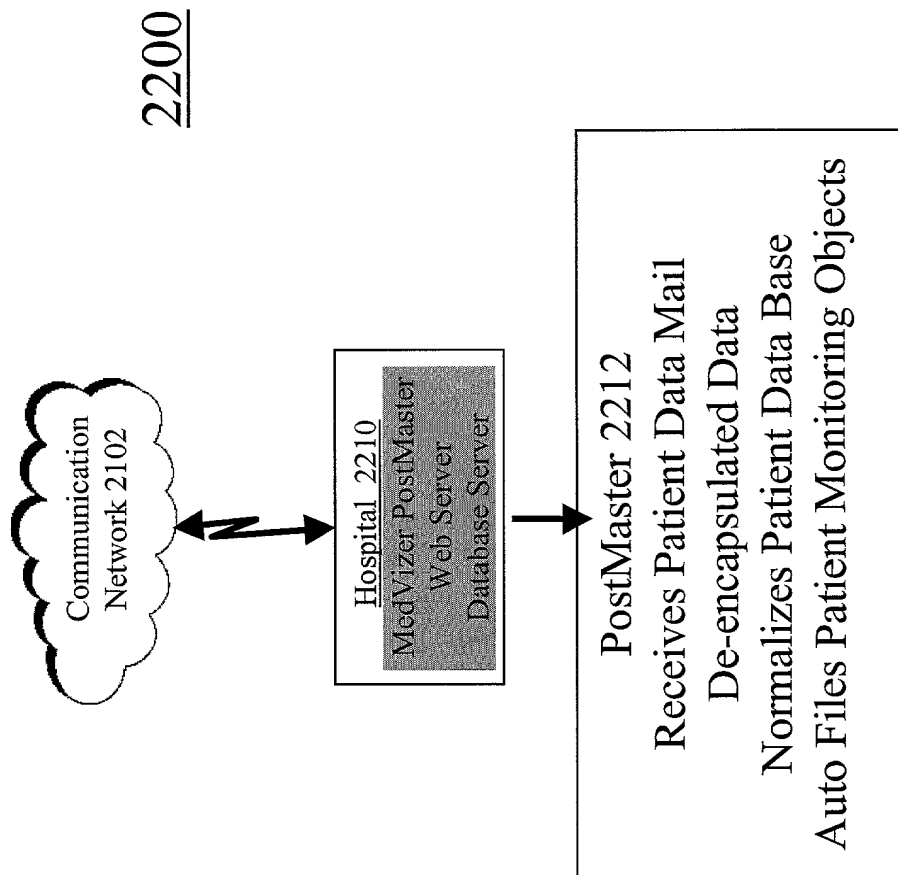


FIGURE 38

2212

